NFIMR

BULLETIN

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Fetal and Infant Mortality Review (FIMR): A Tool Communities Can Use To Identify and Address Issues Related to Health Disparity in Infant Outcomes

INTRODUCTION

The U.S. infant mortality rate decreased to 7.2 in 1998 approaching the year 2000 goal of 7 deaths per 1,000 live births. However, infant mortality data demonstrate that rates for African Americans, American Indians, and some Hispanic subgroups are higher than this national average. Surgeon General Satcher has targeted elimination of this disparity by the year 2010. While vital statistics data document this problem, they may not always suggest strategies to address it. Community-based fetal and infant mortality review (FIMR) is an action-oriented, continuous quality-improvement process that can play a significant role in better understanding community issues associated with racial disparity and developing racially and culturally sensitive interventions. This document reviews the population-based data about disparity in infant health outcomes, defines the FIMR process, describes the potential role of this method in addressing disparities in outcome, and provides specific examples of successful, new community actions developed by culturally diverse FIMR programs.

BACKGROUND

Unique among all health outcomes, infant mortality has always been viewed as a sentinel event that serves as a measure of a community's social and economic well-being as well as its health. It is also a measure of the organization and abilities of its health and human services resources. Infant mortality is associated with a variety of factors including quality and access to prenatal and pediatric health care, socioeconomic conditions, family stressors, strength of local service systems and community resources, and the soundness of the community's infrastructure.

Today, in the United States, about two-thirds of infant deaths occur during the first 28 days of life, the neonatal period. The most frequent causes of death during this period are birth defects, low birth weight/preterm birth, and respiratory distress syndrome. The remaining one-third of infant deaths occur during the postneonatal period between 29 and 364 days of age. The most frequent cause of death during this period is sudden infant death syndrome (SIDS), followed by birth defects and unintentional injuries. (1)

The U.S. infant mortality rate decreased from 9.2 in 1990 to 7.2 in 1998, approaching the year 2000 goal of 7 deaths per 1,000 live births. The decrease is believed to be attributable to many factors including use of new

medical treatments such as surfactants, improved screening for fetal abnormalities, regional transport for high-risk deliveries, improvements in case management, and increases in early enrollment for prenatal care. Protective health behaviors— such as not smoking and placing infants on their backs to sleep—may also have contributed to this decrease. (2)

This decline, however, is not uniform across the nation. Infants born into poor families are still twice as likely to die as those born to families above the poverty level. Studies also show that deaths due to preterm labor and low birth weight, respiratory distress syndrome, infections specific to the perinatal period, and maternal complications of pregnancy contribute disproportionately to the disparity in infant mortality. (3)

The African-American community shows evidence of the greatest disparity in infant mortality with its rate (13.8 per 1,000 live births) more than double that for white infants (6.0). The Hawaiian infant mortality rate (10.0) as well as the Native Americans infant mortality rate (9.3) are higher than the overall national rate. While Latinos have an overall infant mortality rate of 5.8, rates for Puerto Ricans are higher (7.8). Asian/Pacific Islanders appear to have the nation's lowest infant mortality rate. However, Asians have the highest proportional infant mortality rate from birth defects. Finally, the overall postneonatal mortality rates are significantly higher for African-American and Native American infants. (4)

Infant mortality rates also vary widely by state. For 1998, state infant mortality rates varied from a high of 10.5 in Mississippi to a low of 4.5 in New Hampshire. Statewide white infant mortality rates ranged from 8.0 in West Virginia to 4.4 in New Hampshire. Black infant death rates ranged from 17.1 in Illinois and Nebraska to 10.1 in Massachusetts. Native American infant mortality rates ranged from 15.3 in Minnesota to 7.2 in New Mexico. Some states with low white infant mortality rates have very high black infant mortality rates (e.g., Maryland: 5.7 white vs. 14.4 black; and Pennsylvania: 6.2 white vs. 15.8 black). (5)

Infant mortality rates are often higher in large cities than the state overall rates.

The nation's capital, the District of Columbia, had one of the highest overall infant mortality rates (10.4). The District's black infant mortality rate is 17.2. Several other cities did not meet the year 2000 goals of 7.0 infant deaths per 1,000 live births: Memphis, Tennessee (10.9); Detroit, Michigan (10.9); Atlanta, Georgia (10.2); St. Louis, Missouri, (9.5); Birmingham, Alabama (9.3); Chicago, Illinois (9.3); and Cincinnati, Ohio (9.2). (6)

Even among some cities that meet or approach the 7 per 1,000 goal, significant differences still exist between white and black infant mortality rates. Examples include: Santa Ana, Texas (3.9 white vs. 18.6 black); Charlotte, North Carolina (3.7 white vs. 9.1 black); Colorado Springs, Colorado (4.5 white vs. 11.5 black); and Seattle, Washington (3.9 white vs. 9.5 black). (7)

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NATIONAL NFIMR FETAL–INFANT MORTALITY REVIEW PROGRAM

NATIONAL FETAL AND INFANT MORTALITY REVIEW PROGRAM

A collaboration of the American College of Obstetricians and Gynecologists (ACOG) and the Maternal and Child Health Bureau, Health Resources and Services Administration (Grant #5H05MC00012-09)

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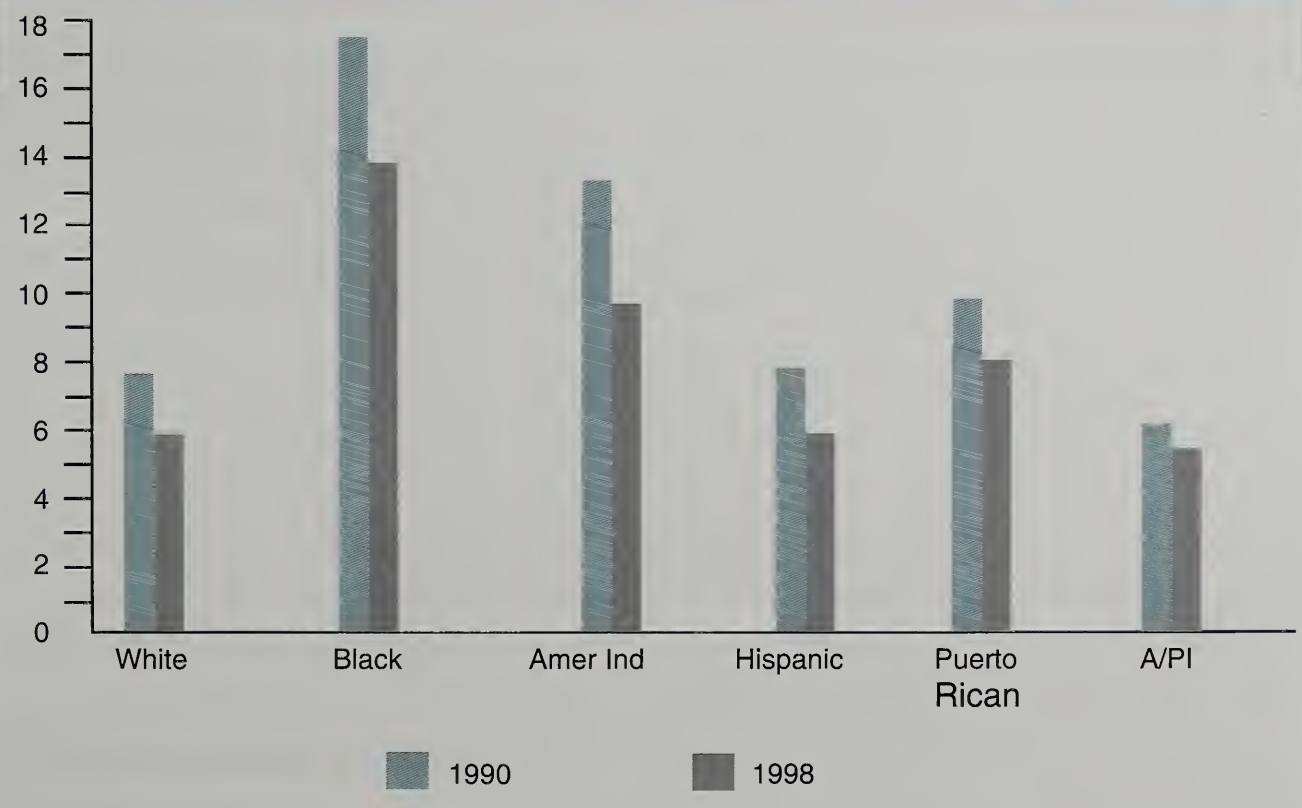
INFANT MORTALITY RATES BY RACE, 1998

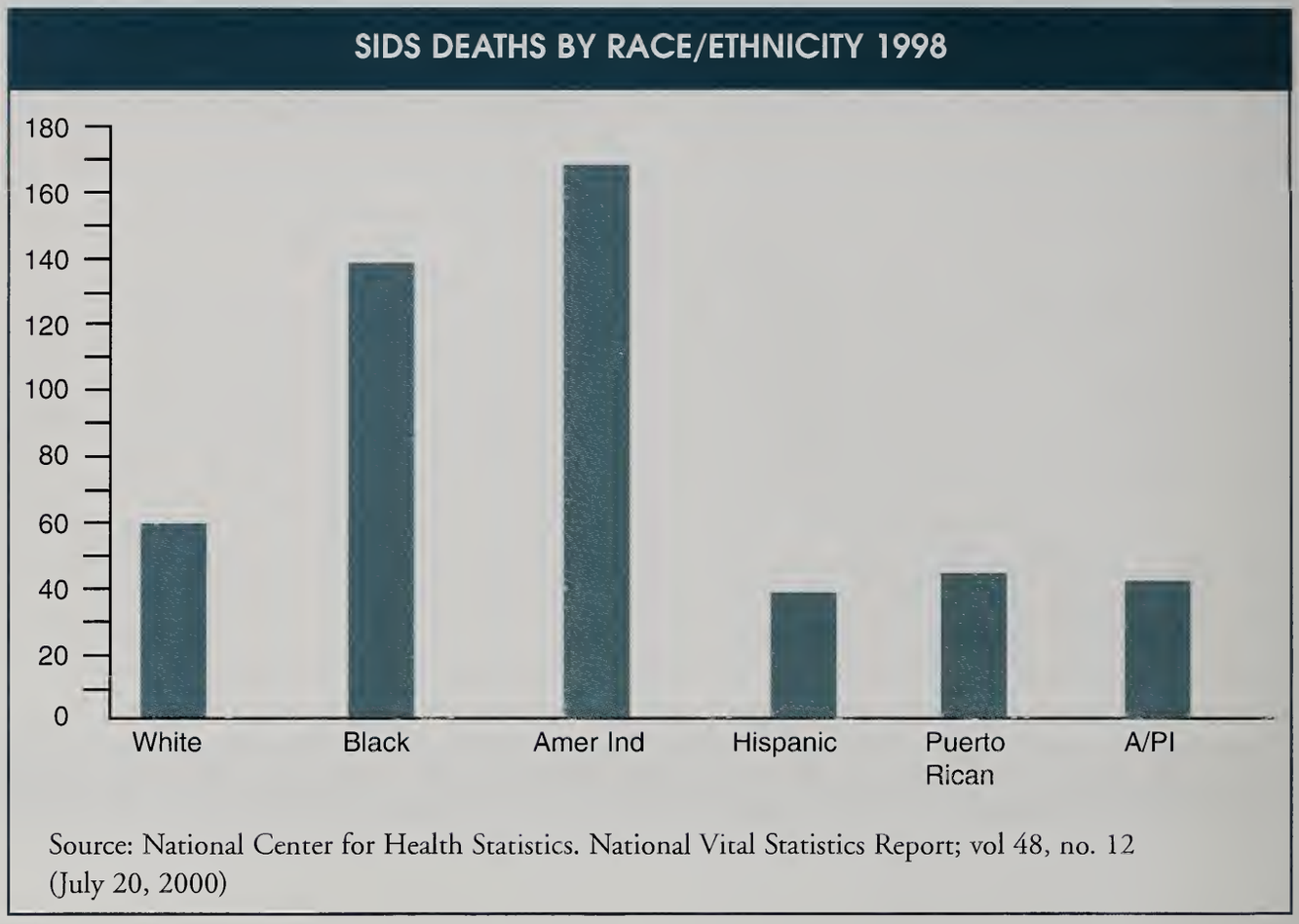
Race of mother	Infant	Neonatal	Postneonatal
All races	7.2	4.8	2.4
White	6.0	4.0	2.0
Black	13.8	9.4	4.4
American Indian	9.3	5.0	4.3
Asian or Pacific Islander	5.5	3.9	1.7
Chinese	4.0	2.7	1.3
Japanese	3.5	2.5	*
Hawaiian	10.0	7.3	*
Filipino	6.2	4.6	1.6

Source: National Center for Health Statistics. National Vital Statistics Report; vol 48, no. 12 (July 20, 2000)

INFANT MORTALITY RATES BY RACE AND ETHNICITY 1998



Source: National Center for Health Statistics. National Vital Statistics Report; vol 48, no. 12 (July 20, 2000)



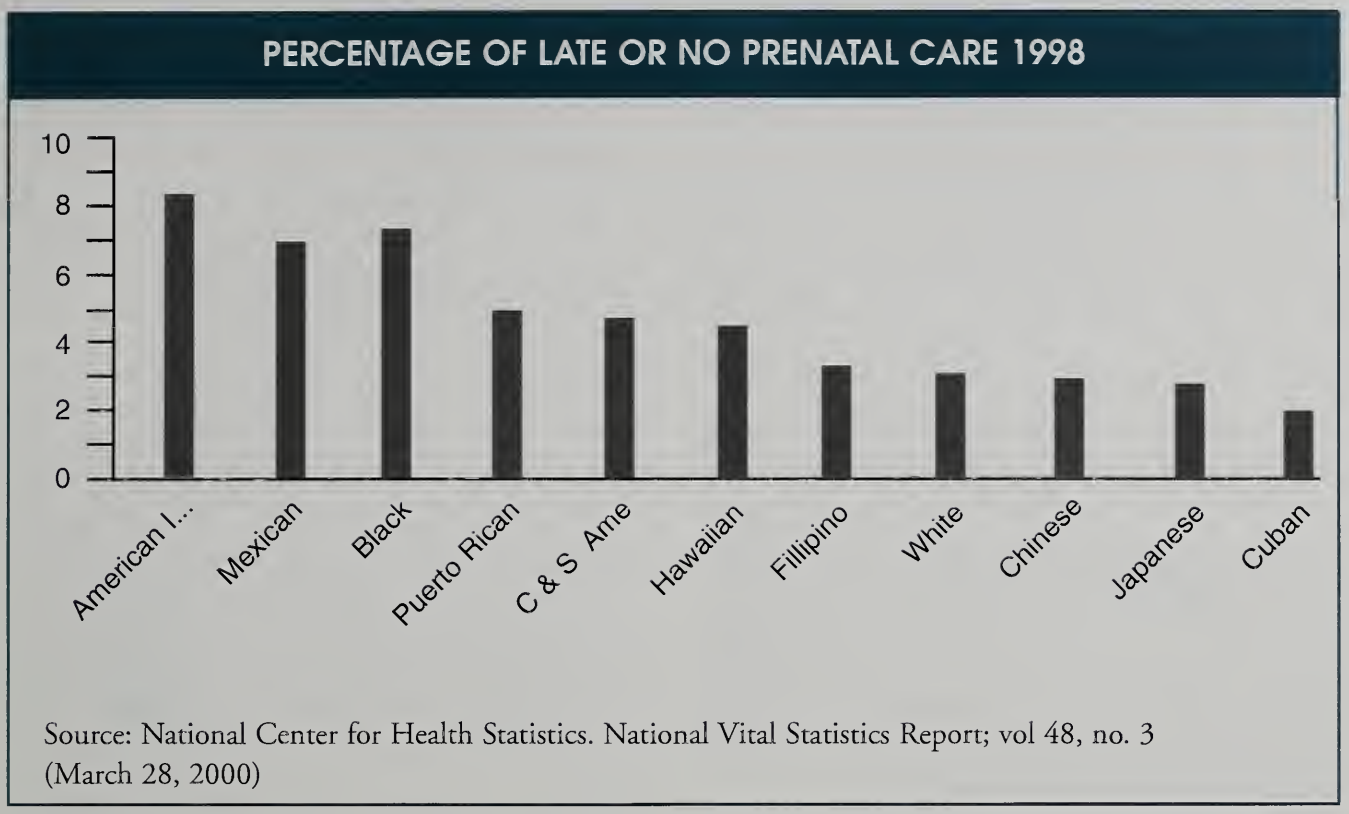
Source: National Center for Health Statistics. National Vital Statistics Report; vol 48, no. 12 (July 20, 2000)

Mistrust of SIDS risk-reduction practices may affect disparity. A recent study conducted by the United States Consumer Product Safety Council and the American Academy of Pediatrics found that only 31% of African-American parents surveyed put their babies on their backs to sleep. (8)

Studies also demonstrate that high-quality prenatal care promotes good outcomes. However, one in five women did not receive care beginning in the first trimester, and about 47,000 did not receive any prenatal care at all. About 84% of white women received timely prenatal care, while only 64% of African-American and Latina mothers did. (9)

Taking a totally different approach, the Coalition for Healthier Cities and Communities promotes the viewpoint that health has economic, civic and environmental components as well as physical. (10) Thus, healthy mothers, infants and families are more likely to thrive in a community with a healthy infrastructure. (See p. 5) Conversely, infant mortality disparities may reflect the convergence of many interconnecting factors associated with personal health, life-style choices, and an unfavorable local community infrastructure including:

- poverty
- lack of training and employment opportunities for minority men
- substandard housing
- lack of health care insurance
- unsafe living environments
- poor social supports
- domestic violence
- substance use
- poor nutrition
- lack of acceptable and accessible prenatal care
- general distrust of medical advice
- prenatal infections such as bacterial vaginosis
- distrust of SIDS risk-reduction messages (11)



Source: National Center for Health Statistics. National Vital Statistics Report; vol 48, no. 3 (March 28, 2000)

Disparity in infant outcome may also reflect underlying American societal problems such as racial and class discrimination. (12) Surgeon General Satcher targeted elimination of racial disparities in infant outcome by the year 2010 as one of his priority areas. (13)

A Vision of a Healthy Community Infrastructure

A resilient economy provides ample jobs that pay a family wage; a wage that ensures a decent standard of living. Police and law enforcement services work with residents to keep neighborhoods safe. An affordable and nondiscriminatory housing market makes it possible for everyone to enjoy decent housing and for many to own their homes. An efficient transportation system connects all sectors of the community and enables residents to reach jobs and services. The physical environment benefits from clean air, safe drinking water, carefully planned growth, and parks where neighborhood families can gather and children can play. Health care services and community resources for childbearing and child-rearing families are available, easily accessible, and culturally competent. Young fathers have training and employment opportunities that, in turn, foster pride and family solidarity. A policy- and decision-making group with culturally representative, active citizen participation works closely with local, state, and federal government to keep child and family issues top priorities and promote community cultural requirements.

Adapted from: Melaville AI, Blank MJ. Together we can: a guide for crafting a profamily system of education and human service. Washington, DC: U.S. Government Printing Office, 1993. p. 6–8

WHAT IS FIMR? (14)

Even though vital statistics data clearly identify disparities in infant outcomes, they may not necessarily suggest strategies at the local level to address the problem. The information from fetal and infant mortality review (FIMR) complements this quantitative population-based data and suggests meaningful local solutions to improve service systems and resources for those most at risk for poor outcomes. As one FIMR team epidemiologist explained, "The infant mortality review program permits us to go well beyond the analysis of vital records data, to reveal the underlying experiences, attitudes, and medical histories of pregnant and parenting women and the offspring they have lost. Held up for inspection and review by a multidisciplinary Community Review Team committed to improving perinatal health outcomes in the community, this information provides a 'window' into the maternal and child health systems in the community." (15)

The overall goal of fetal and infant mortality review is to enhance the health and well-being of women, infants, and families by improving the community resources and service delivery systems available to them. Through FIMR, key members of the community come together to review information from individual fetal and infant deaths. The purpose of these reviews is to identify the factors associated with these deaths, determine if they represent system problems that require change, develop recommendations for change, and assist in the implementation of change.

The overall FIMR objectives are:

- Identify both positive and negative social, economic, cultural, safety, and health factors associated with the overall fetal and infant mortality as well as factors associated with neighborhoods and community groups with higher mortality through review of individual cases.
- Work with the community to plan a series of targeted and cultural interventions and policies that address the negative factors and improve the service systems and community resources.
- Participate in the implementation of these community-designed interventions and policies.
- Assess the progress of the interventions and work to maintain the positive aspects of the systems serving families.

Many sources provide information for FIMRs. These may include records from physicians and hospitals along with those from home visits, WIC, and, perhaps, additional social service records. Information is obtained in an interview with the family, usually the mother. All identifying information (i.e., names of families, providers, and institutions) is removed. A summary of the case is prepared and presented to the case review team (CRT).

Members of the CRT represent a broad range of professional organizations and public and private agencies (health, welfare, education, and advocacy) that provide services and resources for women, infants, and families. The CRT will ask questions as it examines each case. For example: What can this case tell us about how families can use the existing local health care systems? What community infrastructure resources support local families? Where are the gaps in services and resources? What added barriers do culturally diverse families face? What culturally competent resources are available to them? The answers to these questions help the CRT to identify barriers to care and trends in service delivery and suggest ideas to improve policies that affect families.

Typically, the case review team presents its recommendations to a second team of individuals referred to as the community action team (CAT). The CAT is composed of two types of members: those with the political power and fiscal resources and responsibility to create large-scale system change and those who can define a community perspective on how best to create the desired change. The CAT translates the case review team recommendations into action. The CAT team members also participate in implementing interventions designed to address the problems that have been identified.

Feedback is critical to the FIMR process. The ongoing review of new cases identifies consistent trends in mortality and serves as a built-in feedback mechanism that reveals the change or lack thereof in

the service system and community resources. Teams may also develop other ways to stay informed about the progress of interventions.

As problems are resolved and the health care, physical, and social environment for families improves, communities that implement FIMR change for the better. The FIMR process not only improves services and resources for women, infants, and families, but also can generate a sense of energy and hope in a community because the community is, indeed, successfully addressing local issues.

FIMR CAN ADDRESS ISSUES ASSOCIATED WITH DISPARITIES

Community-based FIMR is an action-oriented, continuous quality-improvement process that plays a significant role in building community partnerships, understanding community issues associated with heath disparity, and developing culturally sensitive interventions. Three components of the FIMR process and information from FIMRs are particularly valuable in assisting local communities to understand and work toward eliminating health disparities:

- the diverse coalition/community partnership-building component of the process itself
- inclusion of the voice of local families who have lost their babies–through the information obtained from maternal interviews
- the outcome interventions–based on the decisions of the whole community and the families who live there

The Coalition/Community Partnership-Building Component of the Process Itself

As a first step, each community must develop a greater understanding and appreciation of its diversity. FIMR is a community coalition/partnership-building strategy that can bring together all ethnic and cultural views in the community and become a model of respect and understanding. In turn, this sharing of diverse community values provides a platform for factions within the community to grow in understanding of cultural information and community cultural requirements.

Successful FIMR projects include a wide variety of culturally diverse partners in their activities. Typically FIMR engages 30 to 50 active community members including policymakers, representatives of organizations, families, and consumer advocacy groups. Team membership should reflect both the community at large and the community most affected by high infant mortality rates.

> "During the past three years, the FIMR teams have grappled with many difficult issues. Racial and ethnic sensitivity of all team members has increased. We believe the CRTs have worked well together and have all grown in understanding of others who are not of their sex, race, ethnicity, or profession."
>
> Mary Hibbard, MD, Former Commissioner of Health, Suffolk County, New York

Inclusivity Checklist

Instructions: Use this Inclusivity Checklist to measure how prepared your FIMR program is for culturally competent community action and identify areas that need improvement. Place a check mark in the box next to each statement that applies to your group. If you cannot put a check in the box, this area may need change.

[ ] The membership of our FIMR teams reflects the cultural diversity of the community.

[ ] We make special efforts to invite community leaders and power brokers who reflect the cultural diversity of the community to join our FIMR team.

[ ] Our FIMR mission, recommendations, and community actions reflect the contributions of diverse cultural and social groups.

[ ] We are committed to fighting social oppression in all agencies and institutions represented on our FIMR teams and in our work with the community.

[ ] Members of diverse cultural and social groups are full participants in all aspects of our FIMR's work.

[ ] Speakers from any one group do not dominate meetings.

[ ] All segments of our community are represented in decision making.

[ ] There is sensitivity and awareness regarding different religious and cultural holidays, customs, and recreational and food preferences.

[ ] We communicate clearly, and people of different cultures feel comfortable sharing their opinions and participating in meetings.

[ ] We prohibit the use of stereotypes and prejudicial comments.

Adapted from: Kaye G, Wolff T, editors. From the ground up: a workbook on coalition building and community development. 2nd ed. Amherst, MA: AHEC/Community Partners; 1997. p. 69

Bringing all these entities together to address community issues is an achievement in itself. FIMR meetings and discussions about the health and well-being of women, infants, and families provide a real opportunity for community members to grow in understanding and appreciation of cultural beliefs and behaviors that differ from their own. Because of this unique opportunity for civic understanding, FIMR teams are better able to uncover issues related to disparities and come to consensus about what should be done to prevent them.

The Growing Into Life FIMR Task Force . . ."has built respect and friendship among races, between classes, around language barriers, and among those of differing political and economic interests."

-Karen Papouchado

For example, Aiken, South Carolina, has received a federal "Models That Work" Award for its FIMR effort in mobilizing the community to improve service systems and resources for women, infants, and families. The city developed the Growing Into Life FIMR Task Force and rallied over 150 organizations into a vibrant community coalition to reduce infant mortality. Started 12 years ago, the task force evolved from the health department's FIMR project and a state SPRANS grant to reduce infant mortality. The task force brought together representatives from the health department, medicine, agencies, government, law enforcement, and the community. Task force members stay engaged because "the ability to change factors within our control is a very powerful energizing feeling."

Inclusion of the Voice of Local Families Who Have Lost Their Babies Through the Maternal Interview

The FIMR process includes a home interview, if she agrees, with the mother who has experienced a loss. Very few other maternal and child health initiatives include this comprehensive type of family perspective. The mother is asked about the health and human services and resources that were available, barriers to care, services she received or wished for, her cultural worldview of the experiences during pregnancy and the birth and death of her child, background information about her neighborhood's resources and infrastructure, her relationship with the father and other support people, physical/emotional stressors, economic hardships, and grief reaction to the loss.

The purpose of the FIMR home interview is:

- to learn about the mother's experiences before and during pregnancy
- to learn about the events during the infant's life and around the time of death
- to identify community infrastructure assets and deficits that affected her life during her pregnancy, birth, and the death of her infant
- to assess the family's needs and provide appropriate culturally appropriate referrals
- to facilitate bereavement and suggest appropriate interventions
- to accurately convey the mother's story of her encounters with the local systems and resources and her loss to the larger community

> "Maternal interviews give a voice to the disenfranchised in my community, those without clout or power. FIMR provides a rare opportunity for the "providers" in a community to hear from the "consumers."
>
> Patt Young, FIMR Interviewer, Alameda/Contra Costa Counties, California

The home interviewer then conveys the mother's de-identified story to the FIMR members. Thus, the home interview lets the voice of each bereaved parent speak to the community at large. The community finds that this home interview provides some of the most valuable information in the review. It is extremely important to their understanding of whether or not services and community resources are available, accessible, and culturally appropriate. FIMR teams can also more readily identify issues of racism and other forms of discrimination in service delivery systems through the interview and begin to address them.

The Outcome Interventions—Based on the Real Needs of the Community and the Families Who Live There

Communities that have continued their FIMR efforts over time have learned that health for women, infants, and families is not only health care or medical treatment for disease. They look outward to the community and see that healthy women, infants, and families are more likely to thrive in cohesive, culturally competent, and economically sound neighborhoods. Healthy communities nurture healthy families.

For this reason, these programs would tend to view a high infant mortality rate as a broad indicator of an unhealthy community infrastructure as well as of family distress. Poverty, social isolation, inadequate housing, poor nutrition, neighborhood disintegration, and a host of other social and economic hardships contribute to disparity in outcome. No one who participates in FIMR can fail to appreciate the impact of all these factors.

This view is also consistent with community development theory:

- Individuals and families should be understood in the broadest context of their environment. Thus, when examining social problems related to disparities (e.g., drug abuse, teen pregnancy, etc.), FIMR teams are considering the major forces in American life today that have an effect on these problems. Some of these forces may include racism, sexism, class elitism, and social and economic injustices.

- Community FIMR programs are committed to addressing those components of local society that require change rather than simply improving ways to help families adapt to society's ills. (16)

The actions and interventions that are developed by the community FIMR coalitions have two unique, proactive features relevant to identifying and addressing health disparities:

- The actions grow out of a broad-based family perspective. They are crafted to address the needs of many culturally diverse families, not just a few.

- The actions result from the decisions of an inclusive FIMR coalition/partnership. Thus, they represent the collective wisdom and expertise of the entire community, not just a part.

"The process that brings together diverse people to learn from the story of a family that experienced a fetal or infant loss helps awaken both commitment and creativity. The stories illustrate community needs that are clearly concrete, local and significant, while the interaction among diverse community participants generates ideas for action that might lie beyond the imagination and power of an individual provider or agency."

Seth Foldy, MD, Commissioner of Health, Milwaukee, Wisconsin

Finally, in 1998, President Clinton's Initiative On Race/OneAmerica identified eight key characteristics of programs intervening effectively to reduce disparity and discrimination. These characteristics include: promoting racially inclusive collaboration; educating on racial issues, raising racial consciousness; encouraging team member introspection; expanding opportunity and access for individuals; fostering civic engagement; and/or assessing the program's impact on the community. (17) Because of FIMR emphasis on inclusive community partnership building, local problem solving, and advocacy for women, infants, and families, the methodology provides an opportunity to incorporate many of these characteristics.

MAKING A DIFFERENCE: A SAMPLER OF FIMR ACTIONS TO ADDRESS HEALTH DISPARITIES

As a nation, we may not yet understand all the larger societal issues, local infrastructure dynamics, or individual physiologic mechanisms that contribute to disparities in outcomes. FIMR programs across the country, however, have come to the conclusion that there is much that can and ought to be done now to ensure a high standard of service for communities at highest risk for poor infant outcomes. Some common FIMR action agendas related to reducing health disparities that emerge from this sampler include:

- increasing respect and understanding among community agencies, providers, and citizens
- raising community awareness about issues related to health disparities—especially among those at highest risk
- fostering broad-based community involvement in problem solving
- developing culturally and linguistically appropriate health education messages and materials
- ensuring culturally competent health and human services
- creating new, culturally appropriate health services targeted to communities most at risk
- reducing barriers and gaps in services for all families, but especially those at high risk for poor outcomes
- raising awareness about community infrastructure issues that affect disparities, such as cultural and racial discrimination, neighborhood safety, adequate housing, transportation, and the community's economic status

Today there are more than 200 local FIMR programs in 40 states. The information from the many FIMR case reviews of these programs provides a good view into the problem of health disparities. The reviews also suggest unique, locally significant solutions. While it is not possible to document every intervention from each FIMR program, the following sampler demonstrates that the FIMR methodology is being used to address issues related to health disparities in infant outcomes:

Alaska

Issue: In past decades, Alaska has had a high incidence of infant mortality, especially within Alaska Native peoples. In the early 1970s, the Public Health Service (IHS)—with its highly developed system of health care to both urban and Alaska bush communities—began Native infant death reviews. After several years, the Alaska Department of Health and Social Services expanded the mortality reviews to all infant deaths (Native and non-Native). This mortality review process has become known as the statewide Alaska Maternal Infant Mortality Review (AMIMR) Project. The AMIMR Project also includes interviews with mothers who have experienced an infant loss. Each year, a medical epidemiologist conducts an annual aggregate analysis of case information. The findings are presented at an annual meeting in December to the deputy commissioner of Health and Social Services, the Division of Public Health director, and the members of the Maternal-Infant Mortality Review Committee. As a result of this presentation, formal recommendations are made and then finalized with the deputy commissioner and the public health director. These recommendations become the basis for proposing timely actions to the Alaska state legislature, which convenes in January each year.

In 1977, the Public Health Service's mortality review of Native infants documented the need for a program to provide intensive services to medically/socially high-risk pregnant Native women.

Action: The Alaska Public Health Service (IHS) developed and implemented the Nutaqsiivik (Place of Renewal) Program with input from Alaska Native women consultants in the Anchorage area. This program provides services for medically/socially high-risk Native Anchorage women. It is culturally appropriate/sensitive in providing the type of care wanted by pregnant and parenting Native women. When medically/socially at-risk families are identified, they are enrolled in this special program of coordinated care that follows the family from pregnancy through the first year of the infant's life and sometimes for longer periods of time. It includes home visitation and intensive follow-up. Results show that infant deaths have been reduced and that the incidence of child abuse and neglect has decreased.

For more information, contact: George Ives, Alaska Department of Health and Social Services, Division of Public Health, Section of Maternal and Child Health, 3601 C Street, Suite 934, P.O. Box 240249, Anchorage, AK 99524-0249.

California

Issue: In Alameda County, the SIDS rates remained unchanged in the highest risk areas. FIMR case reviews found a high percentage of known risk factors for SIDS---prone sleeping, non-use of cribs or bassinets, co-sleeping, maternal substance use, maternal smoking, etc.

Action: To address these issues, FIMR first surveyed community providers to ascertain the types of SIDS risk-reduction education offered to new families. FIMR team members found that provider SIDS risk-reduction teaching varied in structure, content, and occurrence. SIDS risk-reduction literature was also available only in English. However, the primary languages of their community include not only English but also Chinese, Vietnamese, Spanish, Amharic, Thai, Croatian, and Laotian. Community FIMR team members worked together to produce SIDS educational materials in all eight languages. These materials incorporated the major recommendations from the FIMR.

For more information, contact: Jean Hanson, Alameda County Public Health Department, 1970 Broadway, Suite 1115, Oakland, CA 94612.

Issue: In Humboldt County, Native American families receive services from two systems of service: the Indian Health Services and other government services. FIMR case reviews identified areas where families would benefit from strengthening communications between these systems.

Action: As a result of these findings, representatives from both systems meet to develop timely treatment and/or case management plans for Native American families with identified needs before their newborn infants are discharged from the hospital.

For more information, contact: Dr. Rebecca Stauffer, Humboldt County Public Health Department, 712 Fourth Street, Eureka, CA 95501.

Connecticut

Issue: The year 1997 resulted in 15 infant and 13 fetal deaths for black women in Hartford. This statistically translated to 50% of infant deaths (n=30) and 46% (n=28) of fetal deaths among black women, disproportionate to their share of 38% of all Hartford births. The Greater Hartford FIMR, a project of the Women and Children's Health Network (WCHN), has found this data to be similar in 1999 and 2000.

Action: WCHN is a partnership of Hartford organizations that focus on women's and children's health including medical/social service providers, community organizations, research organizations, and advocacy organizations. The mission of WCHN is that a comprehensive system of high-quality, culturally competent care for women and children will be enhanced and sustained. This group formed the Black Women's Health Initiative as a subgroup of WCHN. The mission of this initiative is that "Black women in the Greater Hartford Area will have improved health and the disparities they experience in health outcomes will be reduced." The initiative will accomplish this through research, education, advocacy, and improvement of services.

For more information, contact: Kelly Sanders, Women and Children's Health Network, c/o Hartford Primary Care Consortium, 30 Arbor Street North, Hartford, CT 06106.

Florida

Issue: In Sarasota County, the community was unaware of the magnitude of the disparity in infant outcomes between the African-American population and the total county population.

Action: FIMR conducted a well-attended community forum in the county's largest African-American neighborhood, with speakers from the local African-American community, including a perinatologist, an obstetrician, a minister, and the former mayor of Sarasota. Local data about the disparity in outcomes were presented. A local college group provided theatrical vignettes to illustrate locally significant barriers to receiving comprehensive prenatal care. Community residents in attendance pledged to help educate their families, neighbors, and friends about risks. Local business owners have agreed to distribute literature about the importance of early prenatal care. A local television station also featured the topic on a talk show directed to African-American viewers.

For more information, contact: Sarah Gorman, Healthy Start Coalition of Sarasota County, Inc., 2477 Stickney Point Road, Suite 311B, Sarasota, FL 34231.

Issue: The Polk County FIMR team found that not every prenatal care provider had Spanish-speaking staff. Therefore, important health education messages about signs and symptoms of preterm labor and danger signs of pregnancy were not being communicated to all Hispanic prenatal patients. Additionally, few Hispanic women would attend Prepared Childbirth Education classes because they were primarily taught in English. Another barrier is that the classes were for couples. Because of their traditions, most Hispanic men did not attend. Typically, childbirth education offers special in-depth information that improves knowledge about important health matters, increases compliance with treatment regimens, and promotes healthy lifestyle habits, thereby helping to reduce the risks for preterm and low-birth-weight babies.

Action: The Healthy Start Coalition collaborated with the East Coast Migrant Association to train two Hispanic family support workers in prepared childbirth education. The standardized Florida Outreach Childbirth Education Project curriculum was used for the training. These workers, who are fluent in Spanish, now conduct home visits to bring the benefits of childbirth education to every Hispanic prenatal patient. The workers teach patients to recognize symptoms of preterm labor, danger signs, and what to do if they occur, as well as many other important health education messages. The home visit also provides an opportunity to conduct a family needs assessment and provide culturally appropriate referrals.

For more information, contact: Holly Boyer, Healthy Start Coalition of Hardee/Highlands/Polk Counties, Inc., Old Town Square, 357 Third Street, NW, Winter Haven, FL 33881.

Issue: Between 1996 and 1999, the nonwhite infant mortality in Jacksonville, Florida, increased from 10.8 to 15.3 deaths per 1,000 live births. White infant deaths rose from 6.4 to 7.0 deaths per 1,000 live births during the same period.

Action: The Northeast Florida Healthy Start Coalition examined fetal and infant deaths by race using the Perinatal Periods of Risk Approach (PPOR). This method divides poor birth outcomes into groups based on age at death and birth weight. Use of these FIMR findings enabled the coalition to develop prevention and intervention strategies tailored to the actual experience in Jacksonville. For example, one important finding that emerged from this analysis was the need for preconceptional care

for women of color. The community successfully submitted a federal Healthy Start grant using this analysis and is currently implementing a unique preconceptional initiative, the Magnolia Project. With a goal of reducing racial disparities in outcome, the project focuses on identifying and improving the preconceptional health of African-American women at risk for poor outcome. Areas for intervention include improving the medical health of the mother, treating infections, addressing child spacing and other family planning issues, improving overall nutrition, taking folic acid supplements, and addressing any specific issues that contributed to previous poor pregnancy outcome.

For more information, contact: Carol Brady, Northeast Florida Healthy Start, 9143 Phillips Way, Suite 350, Jacksonville, FL 32256.

Issue: In 1998, the Panhandle FIMR project, an eight-county program based in Tallahassee, had a nonwhite neonatal mortality rate of 13.4, while the overall nonwhite neonatal rate in the state was 7.5.

Action: A Racial Disparity Task Force for Infant Health was recently formed as a new FIMR subcommittee. The mission of the task force is to raise awareness about the possible factors related to disparity and promote strategies to reduce them. While the task force is still in its infancy, current plans include disseminating health education messages and providing resources through African-American churches and established community groups. Task force members representing the African-American community include clergy, health care and social service professionals, university faculty, family members who have experienced an infant loss, and the Zeta Phi Beta Sorority Stork's Nest Program.

For more information, contact: Junelle Brandt, Capital Area Healthy Start, Inc., 2110 South Adams Street, Suite B, Tallahassee, FL 32301.

Indiana

Issue: In Allen County, FIMR case reviews documented that the black infant mortality rate was four times higher than that of the population as a whole.

Action: Based on these FIMR findings and the community advocacy that they engendered, the state of Indiana awarded the FIMR sponsoring agency, St. Joseph Medical Center, a $50,000 grant to take action to reduce disparities. The pilot program, Healthier Moms & Babies, was launched in 1996. The program focused on care coordination, culturally appropriate education messages and home visiting. Due to the ongoing community support and improved outcomes, the program has received sustained funding and continues to the present.

For more information, contact: Marsha Wetzel, Indiana Perinatal Network, 1716 White Water Court, Fort Wayne, IN 46824.

Issue: In the city of Fort Wayne in Allen County, FIMR case reviews documented the need for culturally appropriate health education messages about the importance of early entry into prenatal care and a healthy lifestyle, including smoking cessation and SIDS risk-reduction actions. Indiana Perinatal Network and the Indiana State Department of Health used GIS mapping to document areas of high infant mortality rates and target media campaigns. The mapping process identified several African-American, Latino, and white neighborhoods as high-risk areas. Strategies for working with each group are being developed.

Action: For example, to specifically reach out to the African-American community, Indiana Perinatal Network is networking with both providers and community leaders to implement FIMR findings. They are specifically linking with the sorority of black nurses and the black ministerial coalition. Currently, cable networks are also airing public service announcements promoting awareness of the need for prenatal care and healthy lifestyle messages titled Baby First . . . Right From the Start. The Indiana Perinatal Network will also spearhead a local bus shelter campaign, reinforcing culturally appro-

priate messages in the African-American neighborhoods identified as high risk. Additionally, many more posters will be strategically placed in schools, churches, clinics, grocery stores, Laundromats, etc. The intent is to blanket the community with messages that promote awareness of the need for prenatal care and a healthy lifestyle. All PSAs and print materials also include the toll-free Indiana Family Helpline for assistance and information, including a free video.

For more information, contact: Marsha Wetzel, Indiana Perinatal Network, 1716 White Water Court, Fort Wayne, IN 46824.

Issue: The Indiana State Department of Health Maternal and Child Health Services wanted to develop a statewide campaign to improve birth outcomes. However, it needed more information to be able to fully develop a program that would be effective and reach the culturally diverse communities throughout the state.

Action: The Indiana State Department of Health, Maternal and Child Health Services worked with the Indiana Perinatal Network and Minority Health Coalition to develop the plan. The Indiana Perinatal Network and Minority Health Coalition has a culturally diverse membership with representatives from African-American and Latino communities. The coalition input helped ensure a culturally competent approach to the state's activities. Based on FIMR findings, it developed the Baby First Campaign. The campaign comprises the following six consumer health education messages suggested by FIMR reviews: 1) Start prenatal care as soon as you find out you are pregnant; 2) Know the signs of preterm labor and what to do about it; 3) Don't smoke while you are pregnant; 4) Pay attention to when the baby moves inside your body; if you count less than 10 movements in two hours, call your health care provider; 5) Eat well and gain 25–35 pounds during pregnancy; and 6) Put your baby on its back to sleep. The Department of Health makes a special effort to ensure that all its educational materials are culturally appropriate. Next, the Department of Health developed GIS maps to identify areas throughout the state at risk for poor outcomes. The maps located neighborhoods with high infant mortality, late prenatal care, low birth weight, maternal smoking, and teen pregnancy. This information helps local cities and counties target services to those most in need.

The state encourages high-risk areas to apply for assistance to develop free pregnancy test sites, prenatal care services, prenatal care coordination, and other needed services. A statewide Indiana family telephone Helpline was implemented. Staff are multicultural and include African-American, Latina, disabled, and white operators. They are chosen because they are sensitive to community issues and are well versed in the FIMR recommendations and health education messages. Each woman who calls the line is screened regarding pregnancy and assisted with needed services and sent a Baby First education packet, which also contains a consumer video based on FIMR findings. Grants have been successfully written to assist communities of color to implement the FIMR recommendations.

For more information, contact: Maureen McLean, Indiana State Department, Maternal and Child Health Services, 2 North Meridian, Suite 700, Indianapolis, IN 46204.

Iowa

Issue: The Siouxland District Health Department serves residents of Woodbury County. This community is culturally, ethnically, and racially diverse. Woodbury County is also located in a tristate region with Nebraska and South Dakota and serves many Native American families. The department needed to understand knowledge, attitudes, and beliefs about SIDS risk-reduction messages in order to promote changes in behaviors. FIMR case reviews also found that many families did not have a crib at home for the newborn.

Action: In a collaborative process, the two local hospitals and the agencies providing home visitation services worked together to develop a postpartum

nursing protocol to ask each new mother: Where will your baby sleep? The Mercy Foundation provided funds to buy cribs for families who needed them. One important cultural lesson that the health department and the hospitals learned is that the Native Americans in this region believe that a pregnant woman should not make plans for the baby or buy a layette or crib until after birth. It is considered unlucky and is forbidden by tradition. Uninformed staff could have misinterpreted this lack of preparation. However, knowing the traditions has made it possible for postpartum nurses to provide culturally relevant support and resources, including a new crib to these families, as needed.

For more information, contact: Mona Scaletta, Siouxland District Health Department, 205 Fifth Street, Sioux City, IA 51101.

Maryland

Issue: The city of Baltimore continues to experience infant mortality rates higher than the state and national averages. For 1998, Baltimore reported a white infant mortality rate of 4.7 deaths per thousand live births. For the same year, the black infant mortality rate was 14.9.

Action: In 1998, the Maryland Commission on Infant Mortality Prevention invited the Baltimore City FIMR to present its findings and recommendations to the Closing the Gap Subcommittee. As a first step, the Baltimore City FIMR recommended that culturally appropriate information about health disparities and strategies to reduce them must reach the neighborhoods most at risk for poor outcomes. Findings from the Baltimore City FIMR will be incorporated into Maryland's Infant Mortality Prevention Media Campaign to reduce the disparities in pregnancy outcomes between the African-American community and the majority population. Health education messages will be used to raise awareness regarding the magnitude of infant mortality among African Americans, the risk factors associated with these losses, and the importance of prenatal care.

The Baltimore City FIMR also continues to collaborate with many community organizations in raising awareness of the issues associated with poor pregnancy outcomes among those at greatest risk, including the following:

- Advocates for Children and Youth Early Learning Workgroup—the FIMR director participates in meetings to ensure that members understand the importance of maternal health and well-being as they relate to child growth and development.
- Early Childhood Committee of the Family League of Baltimore City—the FIMR director works with the local management board in planning activities to include the maternal health perspective regarding infant and child health and welfare issues.
- The Johns Hopkins Urban Health Initiative—the FIMR director presented findings and recommendations to the Council on Urban Health and participated as a member of the Maternal and Family Welfare Subcommittee in drafting a report with recommendations to address health disparities in East Baltimore.
- The Safe and Sound Family Support Program—representatives from the communities identified to be at greatest risk for poor outcomes have joined the FIMR board in developing solutions for community issues affecting African-American families in Baltimore.

For more information, contact: Meena Abraham, MedChi, 1211 Cathedral Street, Baltimore, MD 21201.

New Jersey

Issue: In Camden, New Jersey, the FIMR program was originally implemented to address issues related to health disparity in outcomes. The Southern New Jersey Perinatal Consortium FIMR found that women with no prenatal care (NPC) who deliver a stillborn baby are lost to follow-up after discharge from urban hospitals that typically serve the African-American community.

Action: No follow-up protocol existed for this high-risk group, although a protocol for no-prenatal-care women who deliver a healthy baby was in place. To address this problem, the FIMR brought together the outreach agency, substance abuse providers, and hospital representatives to develop a

culturally appropriate protocol built upon existing resources. Each organization formally approved the protocol and trained its staff to implement the organization's component. Soon substance abuse counselors will provide home visits and, if possible, meet with women before they are discharged from the hospital. Outreach workers, with additional bereavement sensitivity training, also follow up at home.

For more information, contact: Barbara May, Southern New Jersey Perinatal Consortium, Kevin Office Center, 2500 McClellen Avenue, Suite 110, Pennsauken, NJ 08100-4613.

South Carolina

Issue: Aiken's FIMR case reviews found excess infant mortality and low-birth-weight babies in the city's African-American communities. The FIMR also identified a need to increase early and continuous prenatal care in these same neighborhoods.

Action: Aiken's FIMR developed a unique outreach program that capitalized on the preexisting positive relationship between its community-oriented policing program and citizens, MOMS and COPS (Managing Our Maternity Services with Community-Oriented Policing Systems). Trained by public health nurses, community-oriented police officers provide prenatal and postpartum outreach, education, and referrals to women living in their assigned high-risk neighborhoods. With a MOMS and COPS referral, women can avoid waiting in line to obtain health and human services. COPS officers take gifts to newborns and show parents how to avoid SIDS through proper bedding and infant positioning. They also check for smoke alarms. Nurses have found that officers can often find their clients who have missed appointments.

For more information, contact: Karen Papouchado, 7 Burgundy Lane, Aiken, SC 29801.

Virginia

Issue: Several years ago, after reviewing a number of African-American infant deaths due to SIDS, the Richmond FIMR identified the need for culturally appropriate SIDS risk-reduction education materials. The FIMR team was unable to locate materials that depicted an African-American infant sleeping on his back. The team also found that many new mothers as well as other family members and some community day-care providers did not know about SIDS risk-reduction practices.

Action: The Richmond FIMR director worked with the Richmond City Department of Health to design culturally appropriate education materials. They took a photo of an African-American infant and developed a door hanger with the "back to sleep" recommendation. The Richmond Healthy Start Consortium and the regional perinatal council distributed the door hangers throughout the community. This campaign is being continued today. This health education approach has been adapted by several other states.

For more information, contact: Cheryl Nunnally Bodamer, Virginia Commonwealth University Health Systems, MVCH, P.O. Box 980034, Richmond, VA 23298.

Issue: The Northern Virginia Perinatal Council FIMR serves a diverse population including Latino, Asian, Russian, African, African-American, and Arabic families. As a first step in addressing issues related to disparity, the council has recognized the need to provide prenatal and well-child health education messages in all these languages.

Action: The FIMR program has been able to find written health education materials with appropriate reading levels in all these languages, including Russian, Farsi, and Spanish. However, over time, the team discovered another approach that has been even more effective. The Northern Virginia FIMR finds that while not everyone will read printed materials, families who have a Resource Mother or Healthy Families support worker respond to health education messages that these persons teach them. The Northern Virginia Perinatal Council now con-

ducts train-the-trainer conferences among the outreach workers and home visitors who are working directly with these culturally diverse families. The council has conducted training on preterm labor, the importance of prenatal care, SIDS risk reduction, shaken baby syndrome, and child safety.

For more information, contact: Betty Connal, The Northern Virginia Perinatal Council, Innova Fairfax Hospital, 3300 Gallows Road, Falls Church, VA 22042.

Wisconsin

Issue: In the sections of Milwaukee chosen for FIMR reviews, the FIMR noted that families—including African-American, Latino, and Hmong resident—were less likely to place their infants on their backs to sleep.

Action: The Health Department asked faith communities in these sections of Milwaukee to help them reach families with SIDS risk-reduction messages. Nineteen parish nurses serving 24 parishes coordinated a church-based "Back to Sleep" campaign. Because these nurses also integrated the SIDS risk-reduction message into their ongoing teaching plans, the risk-reduction education effort will continue after the campaign ends.

For more information, contact: Karen Michalski, City of Milwaukee Health Department, Frank P. Zeidler Municipal Building, 841 North Broadway, Third Floor, Milwaukee, WI 53202-3653.

CONCLUSION

For local communities, as well as state Title V agencies, FIMR can be useful in helping to understand and intervene to correct factors that may contribute to disparity in infant health outcomes. Specifically, FIMR can:

- bring diverse community members together to participate in FIMR, providing a singular opportunity for all of the members of the community to grow in their understanding of cultural information and the community's cultural requirements;
- identify larger social, racial, and environmental issues associated with disparities in outcome;
- identify specific community infrastructure problems, such as housing and neighborhood safety, as well as gaps in service systems and resources associated with disparities in outcome; and
- develop local interventions from culturally-competent, community-specific, and family-oriented FIMR case reviews.

FIMR empowers the community to develop maternal, infant, and family health policies, programs, and resources that are culturally and socially relevant. FIMR also can generate a sense of community pride and accomplishment, energy, and hope because the community is successfully addressing local issues related to disparity.

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